

SWITCHING MODE VOLTAGE REGULATOR AND METHOD THEREOF

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ABSTRACT OF THE DISCLOSURE

10 A switching mode voltage regulator comprises a pulse
width modulator and an adjustable one-shot circuit to generate an
adjustable signal based on an input voltage, an adjustable voltage,
and a PWM signal from the pulse width modulator at light loading
to switch a high-side switch of an output stage in the voltage
regulator. The ON duty of the adjustable signal is controlled by
15 the adjustable voltage, such that it will be larger than that of the
PWM signal and as a result, the number of switching the switch of
the output stage is decreased, thereby reducing the switching loss
and improving the efficiency of the voltage regulator.